# Health Maintenance Organizations: The Beginning or the End?

*Roger Feldman, John Kralewski, and Bryan Dowd*

*This article describes the changes taking place in a mature HMO market that has been identified as a bellwether HMO community, the Minneapolis-St. Paul metropolitan area. We describe how this market—previously characterized by traditional HMOs and traditional fee-for-service plans—has been transformed within the past five years into a market with a variety of plans competing on the dimensions of premiums, provider choice, and coverage. Among the most significant changes are the evolution of the local Blue Cross and Blue Shield plan into a form resembling an individual practice arrangement (IPA) with broad coverage and broad provider choice, and the appearance of preferred provider plans sponsored by the HMOs. We suggest that such changes have blurred the distinction between health plan types, making traditional plan designations no longer valid for either health policy analysis or health services research. For example, studies contrasting the performance of HMOs and fee-for-service plans should concentrate instead on the various dimensions of these plans, such as coverage and openness of provider choice. The article is intended to stimulate discussion and to suggest a new framework for describing health plan competition.*

Rapid growth in HMO enrollment during the past five years has been accompanied by significant change in the organization of those pro-

---

This article was presented to the 114th Annual Meeting of the American Public Health Association, Las Vegas, Nevada, September 30, 1986.

Address correspondence and requests for reprints to Roger Feldman, Ph.D., Professor, Division of Health Services Research and Policy, University of Minnesota, 420 Delaware St., S.E., Box 729, Minneapolis, MN 55455. John Kralewski, Ph.D. is William Wallace Distinguished Professor of Health Services Management and Director, Division of Health Services Research and Policy; Bryan Dowd, Ph.D. is Associate Professor, Division of Health Services Research and Policy, both at the University of Minnesota.

grams. Once promoted as an alternative to fee-for-service (FFS) health insurance plans, HMOs are becoming increasingly difficult to distinguish from other health plans. Advocates have argued that the concept of health maintenance organizations represents a fundamentally different approach to the organization, financing, and delivery of health care. Insurance plans, they note, primarily furnish enrollees with a "license" to hunt for services appropriate to their needs, while HMOs guarantee the provision of a stated set of services to all enrollees for a predetermined capitation payment.

These appraisals are largely based on the group practice HMO model epitomized by the Kaiser Permanente and Group Health plans. These plans were used as models to define the concept by those promoting HMOs and those developing the regulatory environment. The characteristics identified by Luft (1981) in his extensive review of the HMO concept reflect this paradigm. The most noteworthy point to the following:

1. The HMO assumes a contractual responsibility to provide or assure the delivery of a stated range of health services.
2. The HMO serves a population defined by enrollment in the plan.
3. The consumer pays a fixed annual or monthly payment that is independent of the use of services.
4. The HMO assumes at least part of the financial risk or gain in the provision of services.

These provisions clearly created incentives for HMO physicians to practice medicine differently than physicians in the FFS sector. First, since HMOs agreed to provide both financing and delivery of health care, physicians shared the financial risks associated with utilization of health services and the provision of care. Second, the HMO served a defined population. HMO physicians consequently had an incentive to assume a population perspective and to integrate preventive and curative services.

Despite some inconsistencies in the HMO concept, it was structured remarkably well; different conceptual elements were mutually supportive. For example, prepayment gave patients an incentive to seek preventive care, which the HMO physicians had an incentive to provide since they were dealing with a defined population. The agreement to provide needed services was reinforced by group practice organizations, which facilitated managed treatment and referral patterns. Thus, the HMO concept provided a model that was a meaningful

alternative to FFS medicine. The power of this concept is demonstrated by its success in establishing a place in the health plan market, despite determined and often underhanded opposition by organized medicine.

With the development of IPA HMO models in the mid-1970s, these characteristics became somewhat less pronounced. While IPAs provide a wide choice of physicians, they do not by any means guarantee that any one of those physicians will accept the enrollee as a patient.[1] In many ways they provide a hunting license similar to the traditional FFS plans. Moreover, their physicians generally continue to see patients covered by other insurance mechanisms as well as providing services for HMO patients and thus, like fee-for-service physicians, they lack a defined patient population for which they are responsible.

Since the major growth in HMO enrollment now occurs in IPAs, these differences become increasingly important. The number of IPAs increased from 97 in 1980 to 181 in 1985, a jump of 87 percent. During this time period the number of HMOs of other model types increased by only 17 percent, from 132 to 162 (U.S. Department of Health and Human Services 1980; InterStudy 1985). Enrollment in IPAs increased from 19 to 25 percent of total HMO enrollment during this period, while group- and staff-model HMOs were experiencing a large decrease in market share. Many group/staff HMOs reorganized themselves as networks—hybrid organizations with some features resembling both groups and IPAs.

Still, until recently in most communities, a reasonably clear distinction remained between HMOs, including the IPAs, and fee-for-service health insurance plans. There is increasing evidence now, however, that in mature HMO markets this distinction is disappearing. HMOs in these markets are moving away from the traditional models toward very loosely configured IPAs, while many fee-for-service insurance plans are creating risk-sharing arrangements with providers and, at times, are linking their plans to a limited number of selected physicians and hospitals in ways similar to HMOs.

Given that the definitions of both HMOs and fee-for-service plans have become very imprecise, the question naturally arises: how should health plans be defined for the purposes of health services research and policy analysis? Furthermore, what factors have caused the recent blurring of plan types and what will the final outcome be? One possibility is that all health plans will gravitate toward a single type, resembling neither a fee-for-service plan nor an HMO, but some yet unrecognized hybrid. On the other hand, the market for health plans may reach an

equilibrium in which many diverse types of plans compete for different niches of the market.

The primary purpose of this article is to describe the changes taking place in a mature HMO market that has been identified by many as a bellwether HMO community, the Minneapolis-St. Paul metropolitan area.

Within a span of five years, the Minneapolis market, previously characterized by five group/staff-model HMOs, two IPAs, and a traditional Blue Cross and Blue Shield fee-for-service insurance plan, has changed to six HMOs, a preferred provider organization, and a Blue Cross and Blue Shield plan, all of which offer about the same range of health benefits plans and closely monitor utilization of services, but which differ in the relative emphasis placed on choice of provider, access to services, deductibles and coinsurance, and premiums.

## HMOs IN TRANSITION: THE MINNEAPOLIS EXPERIENCE

The HMO concept was instituted in the Minneapolis-St. Paul metropolitan area by a very traditional group health plan. Group Health, Inc., a staff-model HMO employing salaried physicians, was founded in 1957 (Anderson et al. 1985, 85–86). The plan encountered significant opposition even in the liberal, Twin Cities medical community. Most physicians viewed it alternatively as a socialistic experiment or a cut-rate way to practice medicine.

Group Health served to familiarize and educate health care consumers and purchasers about prepaid health care. Its strongest early advocates were union groups and public sector employees. These groups, which provided the plan's enrollment base, sought to have the plan offered through major employers, who often were opposed to offering it.

A major breakthrough occurred in 1972 when Park Nicollet Medical Center, a highly respected multispecialty group practice, entered the HMO market.[2] This helped HMOs to achieve a respected image among Minneapolis physicians. An even more significant event was the formation of Physicians' Health Plan (PHP) in 1975. The impetus for the development of PHP was competitive in nature (Anderson, Aday, and Kralewski 1981). PHP, sponsored by the Hennepin County Medical Society, was organized as an independent practice association (IPA) through which independent physicians could offer an alternative to the growing number of HMOs.

Membership in PHP reached 95,141 in 1981, making it about equal in size to MedCenters Health Plan (the Park Nicollet Medical Center's prepaid plan) and about one-half as large as Group Health. Total HMO enrollment in the Twin Cities metropolitan area was 492,189 in 1981, representing about one-quarter of all Twin Cities residents (Minnesota Department of Health 1983, 11).

Physicians' Health Plan has grown rapidly since 1981, and now is Minnesota's largest HMO, with 412,000 enrollees statewide and 3,647 participating physicians in 38 counties. Its main base, however, is still in Hennepin County (Minneapolis and neighboring suburbs), where it lists approximately 70 percent of the county's 2,499 physicians as PHP providers.[3]

In part, PHP's growth may be attributed to the IPA arrangement that allows patients to choose their own doctor.[4] At any rate, this feature of the plan is heavily promoted in PHP's advertising. Consumers appear to be very receptive to this message. A survey of employees in 20 Twin Cities firms showed that families headed by workers over age 21, and all single workers, prefer health plans that offer freedom of choice of medical care providers (Feldman, Dowd, and Finch 1986). The strength of this preference increases with age, perhaps because older workers have more health problems than younger workers and do not want to be tied to a particular set of providers to treat those problems.

PHP has gained a reputation as an aggressive bargainer with both providers and employers. For example, in 1980 PHP terminated coverage of 1,600 Control Data Corporation employees in the Minneapolis area because they were too costly to cover and the company had turned down proposals to limit coverage (*Minneapolis Star & Tribune* 1980). More recently, PHP has unveiled three new plans to supplement Medicare. The key feature of these plans is that patients pay a higher premium if they want a wider choice of hospitals. The least costly plan, with a premium of $15 per month, gives senior citizens the choice of one of nine hospitals. The moderate-cost plan, at $22.50 a month, requires that the patient choose 1 of 15 hospitals. The costliest plan, at $29.10 a month, allows the choice of any of 59 hospitals in the state (*Minneapolis Star & Tribune* 1986).

Consumers took a dim view of these options. During the initial sign-up period, only about 4 percent of the senior citizens who responded to the PHP Medicare supplement offer picked a plan that would require them to change hospitals. More to the point, however, dissident PHP physicians challenged the claim that the plan represented their best interests. Physicians not affiliated with the preferred

hospitals feared the loss of patients. They also wondered if the changes signaled a coming policy shift for all PHP coverage—a concern PHP officials said was unfounded (*Minneapolis/St. Paul CityBusiness* 1986).

The dispute between PHP and its physicians reached the crisis point in June 1987, when PHP announced that its reserve fund was depleted and that the plan could not return any of the 20–30 percent withheld from the PHP physicians' fees (Physicians of Minnesota Board of Directors 1987). A drive by PHP dissidents to oust the board of directors rapidly gathered 1,800 proxy votes (*Minneapolis Star & Tribune* 1987). PHP management sought (but was denied) a restraining order to prevent the doctors' takeover. Finally, under pressure from the governor, the dissident doctors and PHP management reached an agreement under which the dissidents obtained a new share of power on PHP's board of directors.

PHP's rapid growth and its aggressive tactics have sparked three types of response from other Twin Cities health plans. First, premium competition among plans has increased. After years of disturbingly regular increases, health plan premiums for Minneapolis employers have started to level off and in some cases, even to decline. For example, the monthly MedCenters premium for dependent coverage for state employees[5] declined from $110.84 in 1984 to $108.15 in 1985. Dependent coverage for SHARE Health Plan (another Twin Cities HMO) declined from $101.96 to $101.04. Blue Cross and Blue Shield of Minnesota (BCBSM) introduced a new health plan, AWARE Gold Limited, with better coverage and the same premium as the old BCBSM High Option (more about Blue Cross shortly).

Premium competition appears to have been passed back to physicians in the form of lower incomes. Park Nicollet Medical Center physicians affiliated with MedCenters Health Plan (the plan that cut its state premium rate by the largest amount) were forced to accept a cut in their earnings. This created substantial physician resentment toward MedCenters. The doctors said that they would lose $7 million in 1988 if they accepted the proposed MedCenters pay rates (*Minneapolis Star & Tribune* 1987). This dispute currently is in arbitration. The physicians' right to accept patients from other health plans is also under contention.

We have analyzed the "physicians' rebellion" against health plans in detail elsewhere (Kralewski et al. 1987). We noted in that analysis that the individualistic, patient-oriented approach of physicians encourages the use of resources, whereas health plans are designed to conserve resources by integrating the activities of individual practitioners in a manner that achieves the efficient production of services

responsive to market demand. The Minneapolis experience illustrates the possibility that the interests of physicians and health plans may diverge and indeed may develop into sharp conflict as the marketplace evolves. It is noteworthy that both of the conflicts in Minneapolis involve health plans that were started by physicians and were viewed until recently as serving the interests of those physicians. The marketplace will no longer tolerate unlimited use of resources, however, and in a competitive environment health plans will continue to put pressure on doctors' fees and, therefore, on their incomes.

The second market reaction has come from Group Health, Inc. As we noted earlier, Group Health is the oldest Minnesota HMO and it was the largest until it was surpassed by PHP. Group Health enrollment growth has tended to lag behind that of other HMOs, and it has been unable until recently to build on its base of public and unionized enrollees. To reverse these trends, Group Health has offered two preferred provider products: GroupCare and CareSpan. Under the GroupCare arrangement, members receive 100 percent coverage for services when care is provided by, or arranged and authorized by, a Group Health physician. Alternative coverage (for care obtained outside of Group Health medical centers and not prescribed by a Group Health physician) is provided under a standard major medical health insurance policy underwritten by MidAmerica Mutual Life Insurance Company. The major medical benefit pays 80 percent of eligible expenses after a $150 deductible per calendar year; preventive health care and routine newborn care are not covered. CareSpan is a similar preferred provider arrangement jointly offered by Group Health and the Prudential Insurance Company.

Clearly, these new plans are aimed at the market segment that wants freedom of choice. By combining freedom of choice when they want it for those who are willing to accept lower coverage, plus complete coverage when they consult Group Health physicians, GroupCare and CareSpan have transformed a staff-model HMO into a preferred provider organization.

This strategy appears to have arrived just in time, because Group Health's traditional enrollment base is threatened by other HMOs and Blue Cross. Early indications are promising. As of June 1987, about 28,000 enrollees had selected one of Group Health's preferred provider plans, with somewhat larger enrollment in CareSpan. According to a personal communication from Group Health to the authors, most of the new employer group contracts signed by Group Health are of the choice-type products.

The third and possibly most significant market reaction is the new

competitive vigor of Blue Cross. Blue Cross historically has been the largest insurer in Minnesota, accounting for about 27–29 percent of the private health insurance market as measured by its share of private third party payments (Center for Health Services Research 1981, 1982). However, Blue Cross was not in healthy condition in the early 1980s. It lost $26.1 million in 1980, on an income from subscribers of $286.4 million for that year. The loss for the first 11 months of 1981 was $9.6 million (*Minneapolis Star & Tribune* 1982). Blue Cross's problems were due to several causes, including its practice of paying hospital charges, and competition from HMOs and self-insured medical plans. During a period of rapid hospital-charge inflation, Blue Cross was undercut by HMOs, which obtained negotiated discounts from Minneapolis area hospitals. In addition, Blue Cross appeared to suffer "adverse selection" in multiple-plan firms, where relatively healthy employees chose HMOs, leaving Blue Cross with poorer health risks.[6]

Blue Cross's strategy to deal with these problems has had two dimensions: first, BCBSM has stopped paying hospital charges and now aggressively negotiates for hospital discounts; second, the savings generated by these discounts have been used to expand benefit coverage while reducing premium rates. The new plan, called AWARE Gold, provides 100 percent coverage for all visits to participating doctors, routine physical examinations, and preventive care, in addition to Blue Cross's broad coverage of hospital inpatient services. These benefits are similar to those of HMOs. As explained by BCBSM officials, AWARE Gold was specifically designed to compete with HMOs (*Minneapolis Star & Tribune* 1983).

An interesting aside to our story is that AWARE Gold was originally intended to be a preferred provider plan. It began in the spring of 1983 with 20 Twin Cities hospitals. BCBSM did not expect to enroll all 28 hospitals in the Twin Cities, since its negotiated daily prospective payment rates were far below the charges in some hospitals.[7] Nevertheless, in 1984 all Twin Cities hospitals signed up, and all 181 acute care hospitals in Minnesota were participating in the plan in 1985.

Whether by good luck or by planning, Blue Cross has negotiated more aggressively with hospitals than with doctors for price discounts. AWARE Gold withholds 10 percent of a doctor's customary fees until the end of the year as a cushion against plan losses. PHP, with a similar withholding scheme, keeps 20 to 30 percent of the fees charged by its doctors. By choosing the less stringent policy, Blue Cross has thus far avoided the physicians' rebellion that currently threatens PHP and MedCenters Health Plan.

The AWARE Gold plan contains very little cost sharing for cov-

ered services. Blue Cross has also offered "AWARE Gold Limited," which has a $100 deductible for each hospital admission (maximum of two deductibles per family per year) and coinsurance of 20 percent for the first $3,000 of charges per admission. This plan fully covers preventive medical services, routine physical examinations, and well-baby care. AWARE Gold Limited is Blue Cross's answer to the adverse selection problem; it is clearly designed to attract young, healthy individuals and small families who may have some outpatient expenses but who do not expect to have costly inpatient admissions.

The recent changes embodied by the AWARE plans have, in effect, turned Blue Cross into an IPA. Specifically, Blue Cross contracts with hospitals and physicians in their private practice to provide prepaid or largely prepaid health care.[8] Therefore, one would predict that the AWARE plans should be powerful competitors with Physicians' Health Plan and with HMO Minnesota (HMOM), an IPA sponsored by Blue Cross. These predictions are correct: the biggest percentage losers in the 1985 state employees' open enrollment were HMOM, which lost 975 enrollees (41 percent of its previous enrollment) and PHP (14 percent loss). Group Health lost 889 enrollees, although this amounted to only 7 percent of its base. Overall, the two AWARE plans increased Blue Cross's share of the market from 39 to 45 percent (*Minneapolis Star & Tribune* 1985).

The introduction of a new health plan can drastically alter the existing patterns of competition, however, with results that may not be expected. After its very successful debut in 1985, AWARE Gold Limited announced a 4.5 percent cut in its 1986 state employees' premium, while the full-coverage AWARE Gold plan maintained almost constant premiums. But, with healthier people switching to AWARE Gold Limited, this premium structure could not be maintained. When Blue Cross proposed a large premium increase for the 1987–1988 enrollment period, the full AWARE Gold plan was withdrawn by mutual consent. The lesson here seems to be not to trust a new health plan until there is some experience with its costs.

HMO Minnesota was also a casualty of competition in the state employees' group. Blue Cross withdrew HMOM and replaced it with a preferred provider arrangement called "HMO Gold." The new plan, built around the old HMO Minnesota network, offers full coverage to enrollees who use an HMO Gold clinic, 80 percent coverage from the larger network of AWARE physicians, and 80 percent coverage after a $100 deductible from nonparticipating physicians. HMO Gold represents a combination of the gatekeeper approach embodied by the HMOM plan with freedom to use any physician (at extra cost) for

patients who value this plan feature. As such, this illustrates our point that health plans are evolving in forms that cannot be described as purely HMOs or purely fee-for-service.

As a result of these changes, we are witnessing a metamorphosis in the health plan market in Minneapolis. Physicians' Health Plan has become the largest HMO, even though it is not based on a group of salaried physicians or a defined enrollee population. Group Health Plan is busy turning itself into a preferred provider plan, while Blue Cross has emerged from its cocoon as an aggressive IPA. The clear-cut distinction between fee-for-service health insurance plans and health maintenance organizations has become a thing of the past. It is no longer useful in describing the Minneapolis health plan market.

## POLICY IMPLICATIONS

We have suggested that health plan competition in Minneapolis no longer occurs between conceptually distinct entities called "fee-for-service plans" and "health maintenance organizations." Instead, competition occurs along a number of dimensions, three of which we have identified as particularly important: premiums, freedom of choice, and coverage of services. In reality, however, these three dimensions can be pictured as two trade-offs. First, plans with greater freedom of choice should have higher premiums, on average. Second, plans with better coverage (more covered services or lower consumer cost sharing) should have higher premiums. The role of competition in the health plan market is to ensure that premiums for plans with more freedom of choice or better coverage are no higher than is necessary to cover the extra costs of these desirable features.

Economists have proposed that the interests of consumers are best served when they can choose from a variety of products in a competitive market (Rosen 1974). Having a variety of products available means that each consumer can select the product that best suits his or her tastes and willingness to pay. And competition ensures that the marginal price needed to upgrade quality by a small amount just covers the extra costs of production (Feldman and Begun 1985).

In the health plan market, diversity in freedom of choice and coverage of services is desirable because the variation offers plans that best suit consumers' preferences and willingness to pay. From this perspective, the recent developments in the Minneapolis health plan market are favorable. The all-or-nothing choice that formerly confronted consumers has been replaced by a diversity of health plans. In

the dimension of freedom of choice, Group Health still offers a conventional closed-panel HMO arrangement. GroupCare and CareSpan are less restrictive, preferred provider arrangements with a fairly small panel of preferred providers (the Group Plan physicians). PHP is a conventional IPA with a large panel of physicians. The AWARE Gold plans are even more open since they have signed up all hospitals and most physicians in the state, and enrollees also have the option to see a nonparticipating physician at reduced coverage. Finally, traditional FFS plans continue to offer unlimited freedom of choice.

If there is any weakness along this dimension, it probably occurs at the endpoints. We have already discussed Group Health's problems with its closed-panel HMO; something should also be said about the traditional fee-for-service sector. These plans seem to be the "doormat" of the industry. They have lost market share to HMOs, to self-insured plans, and most recently to Blue Cross. In addition, they continue to pay hospital charges, even though charges may be marked up to cover discounts given to Medicare, Medicaid, and other, private payers. Given these conditions, it seems unlikely that firms such as Prudential, Travelers, and Aetna will continue to sell health insurance in the Minneapolis market.

Our view of the future of fee-for-service insurers is not universally shared. Some observers predict that commercial insurers will no longer allow cost-shifters to take advantage of them (*Health Business* 1987). An anonymous referee for this article suggested that commercial carriers may also develop preferred provider arrangements. While a trend in that direction would be possible and, indeed, desirable, we have yet to see much evidence that it is occurring. Anecdotally, a large corporation in Minneapolis/St. Paul saw the enrollment share of its very popular FFS insurance option fall from about 90 percent to 40 percent after it introduced Blue Cross AWARE. But the FFS insurer still has not attempted to control either the price of services or the terms of physician participation in the plan.

Interestingly, physician-controlled IPA plans may be better able than FFS insurers to limit the number of participating doctors. Now that dissident physicians have gained control of Physicians' Health Plan, they appear willing to address this issue. Dr. James Ehlen, one-time dissident and now chairman of PHP, says that "a provider network that is oversized needs to be downsized" (*St. Paul Pioneer Press Dispatch* 1988, Section D, 6). He suggests that "we will do it in such a way that doctors know why it is happening."

It is also not clear where health plans are headed on the dimension of coverage. On one hand, many employers report that they are increas-

ing the level of cost sharing for services. A survey of 44 large Minnesota employers, conducted in November 1983, showed that 21 percent of the firms had increased the deductibles or coinsurance in at least one health plan during the previous year and that 35 percent were planning such an increase during 1984 or 1985 (Dowd and Feldman 1984). On the other hand, Blue Cross has taken a major step toward eliminating cost sharing in its AWARE Gold plan.

In our view, cost sharing for services must be seen as part of the marketing strategy of health plans. The most attractive plan that can be offered is full coverage with complete freedom to choose your own doctor. This type of plan might be offered if Blue Cross thinks it can capture almost all of the employees in a firm, or if it is competing primarily against another IPA. But a full-coverage plan with freedom of choice may experience adverse selection if it does not reach its enrollment goal. Consequently, Blue Cross also offers its limited-coverage AWARE Gold Limited plan.

We also find that HMOs are experimenting with cost sharing for services. For example, under PHP's "Minnesota plan," employees pay 20 percent of their hospital and surgical bills, and $4.50 for most physician visits (*Minneapolis Star & Tribune* 1985). This plan was offered to small employers—with 5 to 100 employees—starting December 1, 1985.

Cost sharing in HMOs must also be seen as part of a marketing strategy. In this case, it is a way to compete for a share of the 430,000 employees of small companies in the Twin Cities metropolitan area. These firms represent the "last frontier" for HMOs, which have already made substantial inroads among employees in larger companies and the Medicare population. In order to market successfully to small companies—which typically have less generous health benefits than large employers—HMOs must find a way to control their premium costs. PHP's answer to this problem is cost sharing for covered services. Group Health's GroupCare plan is also geared to small businesses. Finally, MedCenters offers a plan called Med-Choice, which covers 75 percent of medical costs if the enrollee does not want to use MedCenters doctors and hospitals.

Given the different types of firms in which health plans compete, it does not seem likely that all plans will converge toward the same level of coverage and cost sharing. Diversity of plan types, with premiums related to the level of coverage, will give consumers a choice of prepayment with relatively high premiums versus cost sharing for services at a lower up-front premium cost.

Figure 1 summarizes our discussion of trends in the Minneapolis

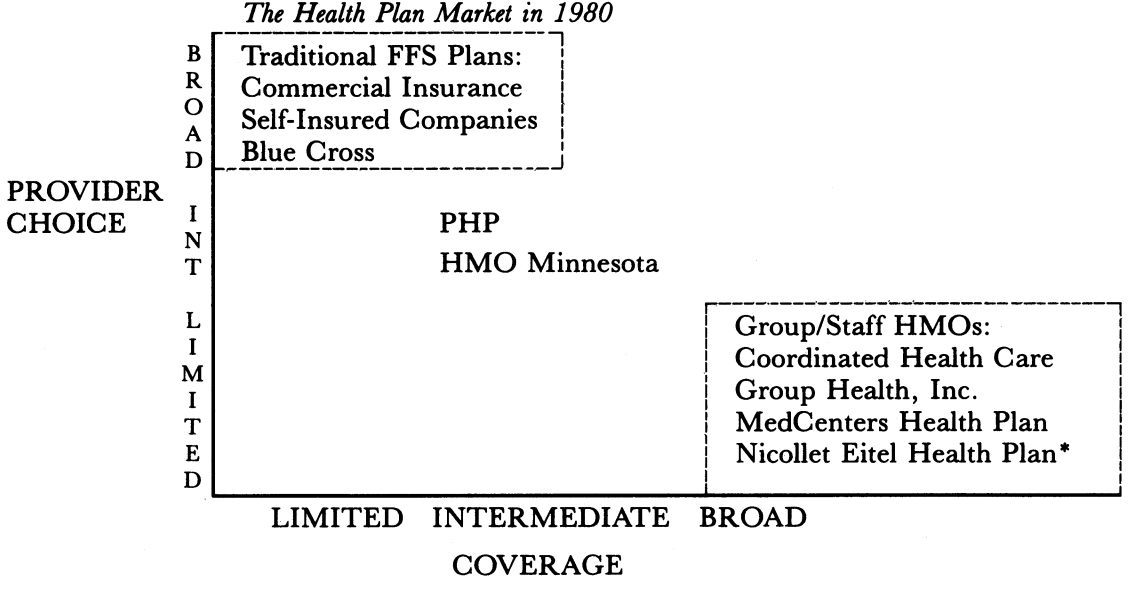
health plan market. In 1980, the market could be described easily as consisting of traditional FFS plans (with broad provider choice and limited coverage) and traditional HMOs with broad coverage and somewhat limited provider choice. The health plan market in 1987 has had a continuum of plans offering different options of coverage and provider choice. The most notable developments have been the new AWARE plans, sponsored by Blue Cross, and the evolution of the traditional HMOs into a variety of new forms, many featuring preferred provider arrangements for consumers who want the option of provider choice within the context of an HMO plan.

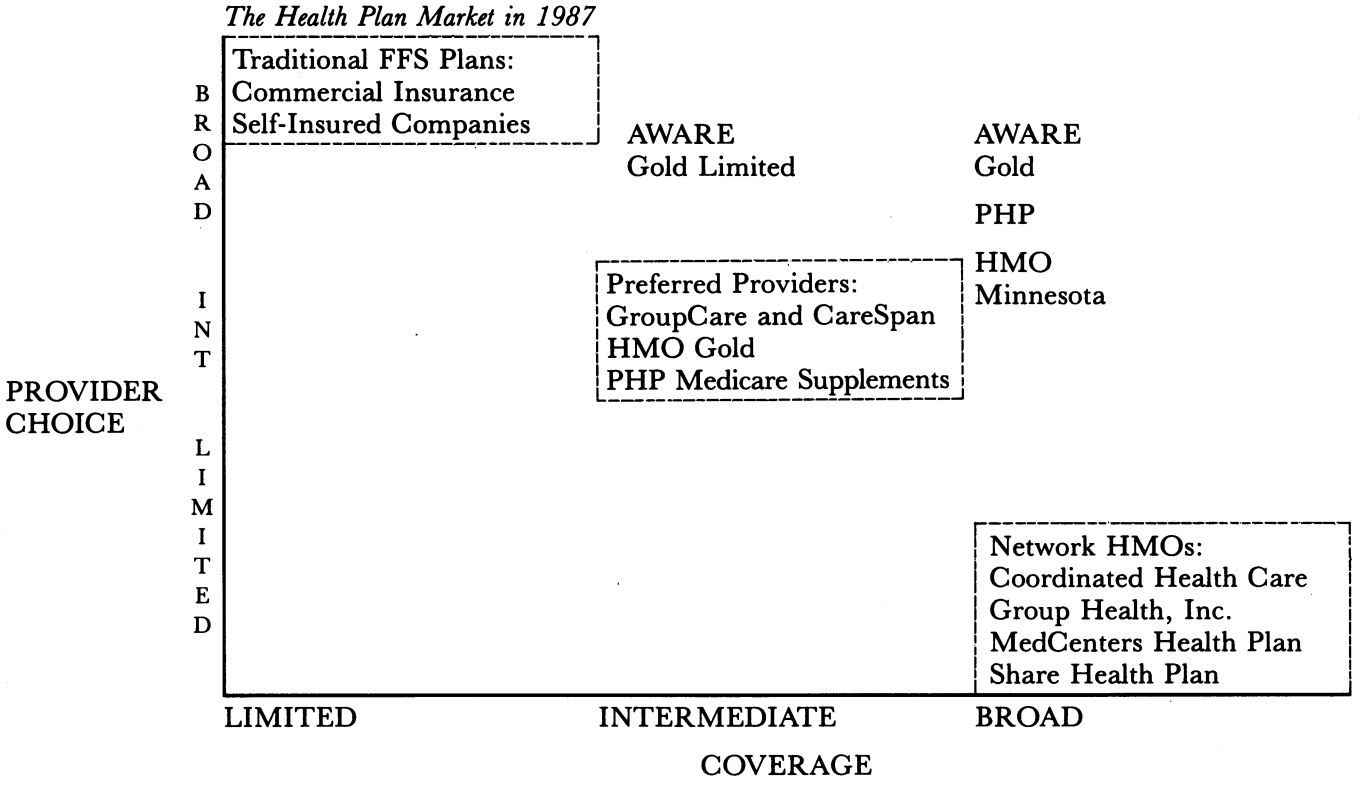
Thus far we have discussed the trade-offs between premiums and freedom of choice or coverage. A more troublesome issue concerns finding ways to make sure that the premium actually charged for each plan is the lowest possible premium, given that plan's level of coverage and freedom of choice. In other words, how can we ensure that the health plan market is competitive?

In the first place, it is critical that employers limit their health benefit contribution to a fixed dollar amount, regardless of the plan the employee chooses. This contribution policy means that employees have to pay the full marginal cost of the more expensive plans; thus, they will tend to reject those plans with premiums too high for a given level of quality. We have shown that employees are very sensitive to these out-of-pocket premium differences among plans: a health plan that currently enrolls 50 percent of the single-coverage employees in a firm will lose 10 percent of the market, or one-fifth of its current share, if its monthly out-of-pocket premium increases by $5. A $10 monthly out-of-pocket premium increase for family coverage will have almost the same effect (Feldman, Dowd, and Finch 1986).

Second, the current HMO Act and regulations should be substantially amended to eliminate the "mandatory offering," "community rating," and "equal premium" provisions. These policies currently force an employer to offer an HMO and make it difficult for the employer to choose its premium contribution level and to discover the cost of covered HMO services (Dowd and Feldman 1985). Proposals made late in the Reagan administration would alleviate these problems. To some extent, HMOs and employers are already sidestepping the provisions of the current HMO Act. For example, the chief executive officer of one Minneapolis HMO told us that firms are demanding experience-rated HMO premiums, despite what the HMO Act says. Some federally qualified HMOs are developing separate, non-federally qualified products in order to compete legally in the experience-rated market.

Figure 1: Diversity in the Minneapolis Health Plan Market






*Merged with MedCenters in 1983.

## POLICY RESEARCH

In general, the goal of research on health plan performance is to compare some measure of performance (cost, use of services, consumer satisfaction, etc.) among different types of health plans. Many characteristics can be used to define types of health plans.[9] One of the commonly studied plan characteristics is whether the plan is an HMO or FFS insurance plan. For example, Luft (1981) reviews numerous studies that compare hospital use in HMOs versus FFS plans. The problem with studies of "the HMO effect" is their very low generalizability because HMOs no longer can be defined as an all-or-nothing concept; HMOs and FFS plans now consist of a number of characteristics that are combined in variable proportions.

In particular, we have argued that health plans compete by offering different combinations of coverage and freedom of choice to consumers. The implication for research is that plan characteristics must be controlled in studies of health plan performance. This is especially true if performance is measured by premiums. Suppose one wants to estimate a premium equation in order to determine whether HMOs or FFS plans have lower premiums, *ceteris paribus*. One method is to regress premiums on plan characteristics and a dummy variable for HMO versus FFS plan. The problem is that two features that were once used to define an HMO (a defined population and prepayment) have now become variable characteristics.[10] This leaves risk bearing and a contractual responsibility to provide services as possible variables to distinguish between FFS plans and HMOs.

An important aspect of risk bearing is the degree of risk placed on the individual physician by the health plan. For example, some health plans (such as HMO Minnesota) use a capitated gatekeeper approach, which puts the primary care physician at risk for services that he or she provides and for referrals to specialists. Most health plans, however, do not place individual physicians at risk. The withholding pools used by PHP and Blue Cross, for example, are returned to participating physicians if the overall performance of the plan is profitable.[11]

The organization of the health plan (group, network, or IPA) should also be controlled. This is particularly important since evidence is growing that the organization of physicians' practices influences their practice styles. Some fee-for-service group practices, for example, have been shown to be as conservative as prepaid practices in the use of resources (Nobrega et al. 1982).

This still leaves the first part of the definition of an HMO—that it

assumes a contractual responsibility to provide or to assure the delivery of a stated range of health services. Does this remain a distinguishing feature of HMOs? We must consider this question carefully. Although the HMO contract may state that it covers a broad range of services, it is not clear that the HMO is ready to deliver these services. Preliminary results from the RAND Health Insurance Experiment show, for example, that HMO patients are less satisfied with the availability of specialists and hospitals than are FFS patients.[12] Fee-for-service plans are also increasingly likely to use various access-limiting features, such as second opinions, preadmission certification, and utilization review. Therefore, on this dimension HMOs and FFS plans are also tending to resemble each other.

The implication for research is that the health plan's willingness to deliver covered services must be controlled in studies of performance. This raises a problem for the investigator, who may have to settle for imperfect proxy measures of this dimension of plan quality. It raises similar problems for consumers, who have to decide whether the plan actually delivers all of the services it promises, and when it does not, whether limits on access can be justified by lower premium cost. We suggest that studies of this question will become increasingly important as all health plans strive to control costs.

An unsettled question is whether consumers have enough information to make intelligent decisions regarding the difference, if any, between services promised and services delivered. This question should be explored by surveys of consumer satisfaction and by studies that compare consumer knowledge in markets with different degrees of competition. We have found some tentative evidence that competition tends to produce reliable information, but this finding is based only on employees who had a choice of health plan, and it needs to be confirmed in other studies.[13]

In summary, we suggest that future research should attempt to measure the controlled effects of different health plan characteristics on performance. What has been termed "the HMO effect" is really an unexplained residual factor in the health plan performance equation: it stands for unmeasured effects that persist after plan characteristics have been controlled. If we are right, the residual should get smaller as good measures of freedom to choose a doctor, plan coverage, degree of physician risk, plan organization, and nonprice rationing techniques are added to the performance equation.

As we look to the future, it is clear that health plans with many of the features of present-day HMOs will continue to survive and to thrive. It is equally clear, however, that all health plans will have to

adjust to the demands of a more competitive marketplace. Ten years from now, researchers will probably conclude that the decade they just watched passing before them marked neither the beginning nor the end of HMOs, but only another chapter.

## NOTES

1. An IPA contracts directly with physicians in independent practice, who may refuse to accept an IPA enrollee as a patient if their practice has reached the size where no new patients are being accepted. A typical IPA contract, however, requires the physician to accept or reject IPA enrollees on an evenhanded basis with enrollees from other health plans.
2. Park Nicollet Medical Center was known as the St. Louis Park Medical Center in 1972. We use the current name throughout this article.
3. PHP enrollment on December 31, 1987, and the number of participating physicians during the month of December 1987, are based on personal communications from PHP to the authors. The number of physicians in Hennepin County in February 1988 is based on a personal communication from the Hennepin County Medical Society to the authors. Our estimate of the number of participating physicians in Hennepin County is derived from the office addresses of PHP physicians, after eliminating duplicate listings for multiple offices. Certain physician groups—most notably, the Park Nicollet Medical Center, which is affiliated with MedCenters Health Plan—are not PHP providers.
4. "Choosing your own doctor" is really a buzzword that means that patients can self-refer to a specialist. In reality, all Twin Cities health plans let patients choose their own primary care doctor. Some of the HMOs, however, do not let the patient see a specialist without the plan's approval.
5. The State of Minnesota is the largest employer in the state, with almost 50,000 enployees covered by health insurance. It is also a bellwether employer, both because it offers a choice of Blue Cross and multiple HMOs, and because the state's contribution to the health plan premium is limited to a fixed dollar maximum. Health plan premiums above the maximum must be paid by the employee. Thus, premium competition for state employees is exceptionally vigorous.
6. We wrote a paper that explored how health plans would compete in a market characterized by adverse selection. When a draft of the paper, with the working title "Bye Bye, Blue Cross" was circulated to BCBSM, their reaction was understandably less than pleasant. The paper was eventually published in a true-to-form scientific journal under the title, "Simulation of a Health Insurance Market with Adverse Selection" (Feldman and Dowd 1982).
7. None of the payments can exceed the 55th percentile of charges in all participating hospitals.
8. Blue Cross is an IPA, rather than a preferred provider plan, because it contracts with all hospitals and 91 percent of the eligible physicians in the

state. Its full-coverage provisions resemble those of Physician's Health Plan. The 10 percent withholding provision is also similar to that of PHP, although it is less stringent. An anonymous referee suggests that 10 percent withholding is comparable to physicians' bad debt losses. This might be true if the withholding pool, which was introduced in 1985, replaced a system wherein physicians had to collect all or part of their bill from the patient. However, Blue Cross's participating provider contracts predate the withholding pool by many years; thus, physicians were not at risk for bad debts under the old system. Of course, one could argue that both PHP and Blue Cross are discounted fee-for-service plans. This would simply reinforce our point that the names used to classify health plans (HMO, fee-for-service, etc.) have ceased to describe the economically relevant features of the plans.

9. Characteristics of the enrolled populations should also be controlled in comparisons among health plans. This raises complicated econometric issues beyond the scope of the present discussion. We will assume that the investigator is able to control for population characteristics.
10. In their insurance role, all health plans serve a defined patient population. Thus, one might ask why this characteristic was *ever* included in the definition of an HMO. We suggest that HMO advocates have tended to view the HMO's insurance and service-providing roles as inseparable. By inference, then, the service providers in an HMO are assumed to have a defined patient population. This is in contrast to the FFS sector, where the typical FFS provider does not have a patient registration list (Luft 1981, 3).
11. We are aware of one Blue Cross plan (not in Minnesota) that uses a gatekeeper approach for mental health and substance abuse. The provider is capitated for each subscriber who signs up. In order to make this type of arrangement work, the providers need to have volume guarantees or assurances. In this case, a preferred provider assurance is used: subscribers who use the capitated providers receive 100 percent coverage; coverage for other providers requires 20 percent coinsurance.
12. The RAND study focused on one HMO—Group Health Cooperative of Puget Sound. Results from this staff model plan may not be generalizable to other HMOs.
13. Only 29 percent of the participants in the RAND Health Insurance Experiment realized that the following statement is false: "If you have to go to the hospital, your doctor can get you into any hospital you prefer." When the same statement was presented to a group of more than 5,000 employees in Minneapolis, all of whom could choose between a FFS plan and one or more competing HMOs, we found a significantly higher percentage of correct answers. This suggests that consumers in Minneapolis are aware that choosing a closed-group HMO limits one's ability to choose any hospital. However, the finding is tentative because all of the respondents in Minneapolis had made an active (and at least partially informed) choice, while the participants in the Health Insurance Experiment were randomly assigned to health plans.

## REFERENCES


Anderson, Odin W., Lu Ann Aday, and John E. Kralewski. "An Empirical Analysis of the Twin Cities HMO Market." Unpublished paper, University of Chicago, Center for Health Administration Studies, July 1981.

Anderson, Odin W., Terry E. Herold, Bruce W. Butler, Claire H. Kohrman, and Ellen M. Morrison. *HMO Development: Patterns and Prospects*. University of Chicago, Center for Health Administration Studies, Continuing CHAS Research Series No. 33. Chicago, IL: Pluribus Press, 1985.

Center for Health Services Research. *Health Care Expenditures in Minnesota: 1976-1979*. Minneapolis, MN: Center for Health Services Research, May 1981.

_____. *Health Care Expenditures in Minnesota: 1980*. Minneapolis, MN: Center for Health Services Research, October 1982.

Dowd, Bryan E., and Roger Feldman. "Biased Selection in Twin Cities Health Plans." In *Advances in Health Economics and Health Services Research*, Vol. 6. Edited by R. M. Scheffler and L. F. Rossiter. Greenwich, CT: JAI Press, Inc., 1985.

_____. "Twin Cities Firms Reveal Recent Changes in Health Benefits Design." Unpublished paper, University of Minnesota, Center for Health Services Research, January 1984.

Feldman, Roger D., and Bryan E. Dowd. "Simulation of a Health Insurance Market with Adverse Selection." *Operations Research* 30, no. 6 (November/December 1982):1027-42.

Feldman, Roger D., and James W. Begun. "The Welfare Cost of Quality Changes Due to Professional Regulation." *Journal of Industrial Economics* 34, no. 1 (September 1985):17-32.

Feldman, Roger D., Bryan E. Dowd, and M. Finch. "How do Employees Choose a Health Plan?" *Hospital Bottom Line* 3, no. 7 (August 1986):1-3.

*Health Business*. "This Tale of Two Cities Portends Only the Worst of Times for Hospitals" 2, no. 7 (13 February 1987).

InterStudy. "HMO Summary: June 1985." Excelsior, MN: InterStudy, 1985.

Kralewski, John E., Bryan Dowd, Roger Feldman, and Janet Shapiro. "The Physician Rebellion." *New England Journal of Medicine* 316, no. 6 (5 February 1987):339-42.

Luft, Harold S. *Health Maintenance Organizations: Dimensions of Performance*. New York, NY: John Wiley & Sons, 1981.

Minneapolis Star & Tribune. "Blue Cross Health Plan to Compete with HMOs," 14 November 1983.

_____. "Clinic, HMO Locked in Dispute," 10 October 1987.

_____. "HMOs Lose Members Among State Employees," 21 November 1985.

_____. "HMO to Cancel Insurance of 1,600," 25 November 1980.

_____. "Losses Raise Rates for Minnesota Blues," 18 January 1982.

_____. "PHP Dissidents Win Changes That Could Shift Power of Board," 25 August 1987.

_____. "PHP Patients Would Pay Part of Bills Under New Proposal," 7 November 1985.

_____. "PHP Plan Speeds Move into New Era by Area Hospitals," 10 March 1986.

*Minneapolis/St. Paul CityBusiness*. "PHP Doctors Challenge Founder, Management," 14 May 1986.

Minnesota Department of Health. *HMOs: Statistical Report on Health Maintenance Organization Operations in Minnesota*. Minneapolis, MN: Minnesota Dept. of Health, 1983.

Nobrega, Fred T., Iqbal Krishnan, Robert K. Smoldt, Charles S. Davis, Julie A. Abbott, Eda G. Mohler, and Walter McClure. "Hospital Use in a Fee-for-Service System." *Journal of the American Medical Association* 247, no. 6 (12 February 1982):806–10.

Physicians of Minnesota Board of Directors. *Report to Physicians* 1, no. 2 (June 1987):1.

Rosen, Sherwin. "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition." *Journal of Political Economy* 82, no. 1 (January/February 1974):34–55.

*St. Paul Pioneer Press Dispatch*. "MedCenters, PHP Doctors Face Market Forces in Pay Raise Goal," 15 February 1988, Section D, 6.

U.S. Department of Health and Human Services. *National HMO Census of Prepaid Plans*. DHHS Publication No. (PHS) 80-50159. Washington, DC: Government Printing Office, 30 June 1980.